

WHAT IS CLAIMED IS:

1. A mold release agent comprising 0.003-2 weight percent amine-functional silicone and 0.001-2 weight percent hydroxy-functional silicone, said amine- and hydroxy-functional silicones being dispersed in a water carrier phase.
2. A mold release agent according to claim 1, said amine- and hydroxy-functional silicones each having a molecular weight in the range of 1,000-100,000.
3. A mold release agent according to claim 1, further comprising a slip agent in an amount of about or less than 2 weight percent.
4. A mold release agent according to claim 1, said mold release agent having 0.1-10 weight percent total nonvolatile solids.
5. A mold release agent according to claim 1, having a pH of 4-10.
6. A mold release agent according to claim 1, said amine-functional silicone being CAS No. 71750-80-6.
7. A mold release agent according to claim 1, said hydroxy-functional silicone being CAS No. 556-67-2.
8. A mold release agent according to claim 1, having about 0.055 weight percent amine-functional silicone and about 0.014 weight percent hydroxy-functional silicone.
9. A mold release agent according to claim 8, said amine-functional silicone being CAS No. 71750-80-6, said hydroxy-functional silicone being CAS No. 556-67-2.
10. A mold release agent according to claim 1, having about 1.92 weight percent total nonvolatile solids.

11. A mold release agent according to claim 1, having a mean particle size for nonvolatile solids of 0.09-1.06 μm .
12. A mold release agent according to claim 1, having a pH of about 8.36.
13. A mold release agent according to claim 1, further comprising triazine material in an amount effective to promote or assist room temperature film formation from said mold release agent following application thereof to a mold surface.
14. A mold release agent according to claim 13, said triazine material being a hydroxy triazine material.
15. A mold release agent according to claim 13, said triazine material being hexahydro-1,3,5-tris(2-hydroxyethyl)-S-triazine, CAS No. 004-719-04-4.
16. A mold release agent according to claim 1, being effective to set at 5-40°C within 48 hours after being applied to a mold surface.
17. A mold release agent according to claim 1, being effective to set at 5-40°C within 1 hour after being applied to a mold surface.
18. A mold release agent according to claim 1, being substantially devoid of VOCs.
19. A mold release agent according to claim 1, having no flash point.
20. A mold release agent according to claim 1, wherein said hydroxy-functional silicone is provided from a water-based emulsion.
21. A mold release agent according to claim 1, wherein said amine-functional silicone is provided from a water-based emulsion.

22. A mold release agent according to claim 1, being effective to facilitate at least 10 successive effective releases of molded parts from a mold surface following initial application of said mold release agent to said mold surface.

23. A mold release agent according to claim 1, further comprising at least one component selected from the group consisting of alkoxy-functional silicones and carboxy-functional silicones.

24. A mold release agent according to claim 1, being effective to provide specular gloss to a mold surface of at least 70 specular gloss units according to ASTM D523-89(1999) after 10 consecutive mold releases from said mold surface following initial application of said mold release agent to said mold surface.

25. A mold release agent according to claim 1, being effective to provide specular gloss of at least 70 specular gloss units according to ASTM D523-89(1999) to the surfaces of at least 10 successively molded parts made from a mold surface after initial application of said mold release agent to said mold surface.

26. A mold release agent according to claim 1, being effective to provide specular gloss to a mold surface of at least 80 specular gloss units according to ASTM D523-89(1999) after 10 consecutive mold releases from said mold surface following initial application of said mold release agent to said mold surface.

27. A mold release agent according to claim 1, being effective to provide specular gloss of at least 80 specular gloss units according to ASTM D523-89(1999) to the surfaces of at least 10 successively molded parts made from a mold surface after initial application of said mold release agent to said mold surface.

28. A mold release agent comprising at least one functional silicone dispersed in a water carrier phase, said mold release agent being substantially devoid of VOCs, said mold release agent being effective to set at 5-40°C within 1 hour after being applied to a mold surface.

29. A mold release agent according to claim 28, being effective to cure at 5-40°C within 1-8 hours after being applied to a mold surface.

30. A mold release agent according to claim 28, said functional silicone being selected from the group consisting of amine-functional silicones, hydroxy-functional silicones, alkoxy-functional silicones and carboxy-functional silicones.